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What we claim is:

1. A device comprising:

(a) means for analyzing a representation of a set of out-of-kilter  
communications paths and a representation of a set of in-kilter  
communications paths;

(b) means, responsive to the means for analyzing, for permitting changes to  
both the representation of the set of out-of-kilter communications paths  
and the representation of the set of in-kilter communications paths; and

(c) means, responsive to the means for permitting changes, for generating an  
ordered sequence of recommended reassignments of communications  
paths and for associating at least one out-of-kilter communications path  
associated with the ordered sequence of recommended reassignments with  
a new in-kilter communications path.

2. The device in claim 1 wherein each communications path in the ordered  
sequence of recommended reassignments is reassigned onto a route that is in-  
kilter.

3. The device of claim 1 further comprising means for transmitting the ordered  
sequence of recommended reassignments.

- 5           4.       The device of claim 1 wherein the means for generating the ordered sequence of recommended reassignments of communications paths is also responsive to a set of capacity constraints.
5.       A method comprising the steps of:
  - 10           (a) analyzing a representation of a set of out-of-kilter communications paths and a representation of a set of in-kilter communications paths to generate an analysis;
  - (b) generating a set of permitted changes, based upon the analysis, to both the representation of the set of out-of-kilter communications paths and the representation of the set of in-kilter communications paths; and
  - 15           (c) generating, in response to the set of permitted changes, an ordered sequence of recommended reassignments of communications paths and associating at least one out-of-kilter communications path associated with the ordered sequence of recommended reassignments with a new in-kilter communications path.
- 20           6.       The method of claim 5 wherein each communications path in the ordered sequence of recommended reassignments is reassigned onto a route that is in-kilter.
7.       The method of claim 5 wherein the number of reassignments in the ordered sequence of recommended reassignments is less than a predetermined number.
- 25           8.       The method of claim 5 wherein the step of generating the ordered sequence of recommended reassignments of communications paths is also responsive to a set of capacity constraints.

- 5        9.        The method of claim 5 wherein each communications path in the ordered sequence of recommended reassignments is reassigned from its existing route to a single new route with the same load.
10.       The method of claim 5 wherein communications paths which are originally in-kilter are reassigned only if such reassignments make it feasible to reassign an out-of-kilter communications path.
- 10       11.       The method of claim 5 further comprising the step of generating multiple backward subsequences, each backward subsequence having an out of-kilter communications path as its first reassignment.
- 15       12.       The method of claim 11 wherein each backward subsequence found is translated to a forward subsequence, and all forward subsequences are combined to form a single ordered sequence of recommended reassignments.